

REMARKSINTRODUCTION:

In accordance with the foregoing, claims 1-15 have been canceled without prejudice or disclaimer, claims 27 and 28 have been withdrawn, claims 16, 17, 29, 30, 32, 33, and 36 have been amended, and claims 38-53 have been added.

No new matter is being presented, and approval and entry of the foregoing amendments and new claims are respectfully requested.

Claims 16-26 and 29-53 are pending and under consideration. Reconsideration is requested.

CHANGES TO THE SPECIFICATION:

The specification has been reviewed in response to this Office Action. Changes have been made to the specification only to place it in preferred and better U.S. form for issuance and to resolve the Examiner's objections raised in the Office Action. No new matter has been added.

OBJECTION TO THE CLAIMS:

On page 3 of the Office Action, the Examiner objects to claim 16 for an obvious typographical error. Claim 16 has been amended in accordance with the Examiner's suggestion. As such, it is respectfully requested that the Examiner reconsider and withdraw the objection.

REJECTION UNDER 35 U.S.C. §102:

In the Office Action at page 3, the Examiner rejects claims 16-24, 30, 31, 33, and 35 under 35 U.S.C. §102 in view of Nitta et al. (U.S. Patent No. 4,015,230). This rejection is respectfully traversed and reconsideration is requested.

By way of review, Nitta et al. discloses a semi-conductive ceramic plate 1 having interdigital electrodes 2 as shown in FIG. 1, and a semiconductive ceramic layer 3 having interdigital electrodes 5 as shown in FIG. 2. The semiconductive ceramic includes chromium oxide and a metal oxide. The electrodes 2, 5 are of a semiconductive material having less resistance than that of the semiconductive ceramic material. The resulting structure is a resister whose resistance varies as a function of humidity as shown in FIG. 3. (Col. 2, lines 30-51, col. 3, lines 9, 2, 23-50; FIGs. 1-3 of Nitta et al.) However, Nitta et al. relies upon the conductive properties of the semiconductive ceramic material in order to detect the humidity.

In contrast, claim 16 recites, among other features, that “the gas is received into the gap such that the liquid forms a conductive path between said first and second electrodes as to vary a resistance across the gap,” and “a bottom portion of the gap exposed to the gas comprises a non-conductive material.” As such, it is respectfully submitted that Nitta et al. does not disclose or suggest the recited invention of claim 16.

For similar reasons, it is respectfully submitted that Nitta et al. does not disclose or suggest the invention recited in claim 30.

Claims 17-24, 31, 33, and 35 are deemed patentable due at least to their depending from corresponding claims 16 and 30.

In the Office Action at pages 3-4, the Examiner rejects claims 16-24 under 35 U.S.C. §102 in view of Harman III et al. (U.S. Patent No. 4,707,244). This rejection is respectfully traversed and reconsideration is requested.

By way of review, Harman III et al. discloses electrodes 22 disposed on a non-conductive substrate 21. As shown in FIGs. 1 and 4, a coating 57 is disposed on the electrodes 22 and over gaps 23 formed between the electrodes 22. The coating 57 is of an electrolytic material that traps moisture and serves as an electrolyte for electrolysis carried out between the electrodes 22. (Col. 3, lines 28-38, col. 4, lines 16-29, 51-66; FIGs. 1 and 4 of Harman III et al.) As such, as was also found in Nitta et al., Harman III et al. discloses an electrically conductive layer disposed between electrode pairs.

In contrast, claim 16 recites, among other features, that “the gas is received into the gap such that the liquid forms a conductive path between said first and second electrodes as to vary a resistance across the gap,” and “a bottom portion of the gap exposed to the gas comprises a non-conductive material.” As such, it is respectfully submitted that Harman III et al. does not disclose or suggest the recited invention of claim 16.

Claims 17-24 are deemed patentable due at least to their depending from claim 16.

REJECTION UNDER 35 U.S.C. §103:

In the Office Action at page 4, the Examiner rejects claims 25 and 26 under 35 U.S.C. §103 in view of Nitta et al. or Harman III et al. and Nakahara et al. (U.S. Patent No. 5,837,886). The rejection is respectfully traversed and reconsideration is requested.

Even assuming arguendo that the Examiner’s characterization of Nakahara et al. is correct, the Examiner does not rely on Nakahara et al. to cure the above-noted defect of Nitta et al. or Harman III et al. as applied to claim 16, from which claims 25 and 26 depend. As such, it is respectfully submitted that the combinations of Nitta et al. or Harman III et al. and Nakahara et al.

al. do not disclose or suggest the invention recited in claims 25 and 26 due at least to the combinations not disclosing or suggesting the invention of claim 16.

Additionally, the Examiner asserts that one of ordinary skill in the art would have been motivated to use the protecting layer of Nakahara et al. on the electrodes of Nitta et al. or Harman et III al. since doing so would prevent corrosion due to the liquid. The Examiner does not provide a source in the prior art for this motivation. Additionally, even assuming arguendo that Nakahara et al. discloses a protecting layer, it is noted that Nakahara et al. teaches a protecting layer 27 used to increase a bond strength between a lead 20 and a pad 6. Nakahara et al. teaches that, unless the bond strength is needed, the protecting layer 27 is not needed. (Col. 6, lines 3-18 of Nakahara et al.). As such, Nakahara et al. does not suggest using the protecting layer 27 as a coating on electrodes unless bonding to a lead 20 is being performed, and neither Nitta et al. nor Harman et III al. teach bonding leads to the electrodes in the gaps between electrodes.

As a general matter, in order to establish a *prima facie* obviousness rejection, the Examiner needs to provide both the existence of individual elements corresponding to the recited limitations, and a motivation to combine the individual elements in order to create the recited invention. Both the individual elements and the motivation need to be shown to have existed in the prior art. Should the Examiner fail to provide evidence that either one of the individual elements or the motivation does not exist in the prior art, then the Examiner has not provided sufficient evidence to maintain a *prima facie* obviousness rejection of the claim. MPEP 2143.03. Thus, the burden is initially on the Examiner to provide evidence as to why one of ordinary skill in the art would have been motivated to combine the individual elements to create the recited invention, and to demonstrate that this evidence existed in the prior art. Since the Examiner has not provided such evidence, and as the evidence does not readily appear in the asserted prior art, it is respectfully submitted that the Examiner has not provided sufficient evidence of a motivation to combine Nitta et al. or Harman III et al. and Nakahara et al. in the recited manner as is required to maintain an obviousness rejection under 35 U.S.C. §103.

STATUS OF CLAIMS NOT REJECTED:

On page 4, the Examiner objects to claims 29, 32, 34, 36, and 37 for depending from rejected claims. Claims 29, 32, and 36 have been made independent and have not been amended to narrow the scope of the claims. As such, it is respectfully requested that the Examiner reconsider the objection at least as to claims 29, 32, and 36.

PATENTABILITY OF NEW CLAIMS:

Claims 38-52 are deemed patentable due at least to their depending from corresponding claims 1 and 29, and claim 53 is deemed patentable due at least to the prior art not disclosing or suggesting a board having vents.

CONCLUSION:

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, it is respectfully submitted that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

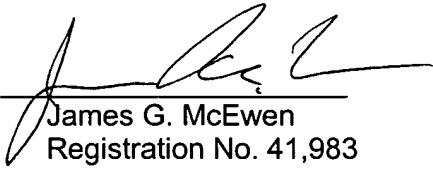
If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any additional fees associated with the filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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